Characteristics of Department of Commerce Operating Units' IT Architecture Processes at Different Maturity Levels[1]

Characteristics	Level 0: No Architecture	Level 1: Initial	Level 2 Under Development	Level 3: Defined	Level 4: Managed	Level 5: Optimizing
Business Linkage	No linkage to business strategies or business drivers.	Minimal, or implicit linkage to business strategies or business drivers.	Explicit linkage to business strategies.	Explicit linkage to business drivers, information requirements.	Periodic re-examination of business drivers. End-to-end process cycle time (business drivers to component definition) is measured.	Process metrics for business linkage driven into requirements-gathering process improvements.
Senior-Management Involvement	We do not need it. That won't work here Everything is fine the way it is.	What is Architecture? Why do we need it?	Management awareness of Architecture effort. Much nodding of heads. Some resistance to implications of having Architecture.	Management aware of Architecture effort and supportive. Management actively supports architectural standards.	Senior management reviews architecture process cycle times, variances.	Management involvement in optimizing process improvements in Architecture development and governance.
Operating Unit Participation	No part of Operating Unit participates or is involved with IT Architecture process.	"We support the architecture process as long as it represents the standards we have already chosen." Standards will only inhibit our ability to deliver business value.	Recognition that it is painful supporting too many kinds of technologies. Perhaps tired of distributing "not fully-developed or tested applications" to Operating Unit IT operations and support.	Recognition that architectural standards can reduce integration complexity and enhance overall ability to Operating Unit IT to achieve business goals. Most of Operating Unit participates actively in architecture definition.	Entire Operating Unit participates actively in architecture definition.	Feedback from all elements of Operating Unit on architecture process is used to drive architecture process improvements.

[1]Meta Group, "Enterprise Process Maturity Model and the SEI Model", Enterprise Architecture Strategies, File 16, July 28, 1998

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Architecture Process Definition	Does not exist.	Exists in ad-hoc or informal form. Early draft form may exist.	Being actively developed. Process definition not widely communicated.	Defined and communicated to IT staff and business management with LOB or Operating Unit IT responsibilities.	Architecture process is part of the culture, with strong linkages to other core IT and business processes.	Concerted efforts to optimize and continuously improve architecture process definition. Modeling of proposed process changes before implementation.
Architecture Development	No architecture at all.	No architecture to speak of. Some standards, established by a variety of ad hoc means.	Architecture standards exist, but not necessarily linked to overarching conceptual architecture. Technical Reference Model and Standards Profile framework established.	Architecture standards development linked to business drivers via conceptual architecture of principles and best practices. Partially completed Technical Reference Model and Standards Profile.	Component architectures defined by appropriate de-jure and de-facto standards. Fully developed Technical Reference Model and Standards Profile. Architecture conformance measured by deployed systems.	Same as Level 4, with process exceptions (standards waivers) used to improve architecture definition process.
Architecture Communication	None.	The “notebook” documenting the last version of the architecture. May have been handed out to IT staff. New IT staff may not automatically get copies.	The “notebook” is updated periodically or a Web site is used to document architecture deliverables. Few tools (e.g., office suite, graphics packages) are used to document architecture. Communication about architecture process via meetings, etc., may happen, but sporadic.	Architecture documents updated and expanded regularly. “Live” documentation of the architecture, via internal Web sites. Tools are used to support maintaining architecture documentation. Periodic presentations to IT staff on Architecture process, content. Likely a part of new-hire training.	Architecture documents are updated regularly, and frequency monitored across architecture content. Regular presentations to IT Staff on architecture process coverage in new-hire training. Tracking and reporting of architecture training to IT Staff (who took it, when).	Same as Level 4, with process exceptions (standards waivers) used to improve architecture communication process improvements.

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Governance	None. Everyone does their own thing.	No explicit governance of architectural standards.	Explicit governance of a few architectural standards (e. g. desktops, database management systems). Variances may go undetected in the design and implementation phases.	Explicit governance of the bulk of IT investments. Formal processes for managing variances.	Explicit governance of IT investments. Formal processes for managing variances feed back into architecture definition.	Same as Level 4, with process exceptions (standards waivers) used to improve architecture governance process.
Program Management	No formal project management discipline or skills.	Little project management discipline or skills. Lack of formal priority-setting mechanism for mission plans.	Planning and scheduling activities linked to time-based IT Architecture developments. Project risk and impact assessment conducted by the Operating Unit "IT Architecture Working Group".	Future IT staffing requirements based on target technical architecture. Change management procedures exist and are linked to formal architecture review. Adhere to formal project management methodology and conduct design review with the Operating Unit "IT Architecture Working Group".	Development of program initiatives includes participation by the Operating Unit "IT Architecture Working Group" representatives. Contingency planning requirements are fed into the IT Architecture planning cycle.	Value assurance program in effect. Mission continuity planning is a core competency and plans are refreshed based on target architecture and transition planning activities.
Holistic Enterprise Architecture	No formal modeling techniques and documentation. No inventory of mission processes, information entities or applications.	Mission, information and application requirements exist only within the technical architecture.	Basic application inventory exists and is maintained. Business models exist of parts of the mission.	Application inventory is linked to the mission. Systems are classified within a basic portfolio of technical condition and mission value. Enterprise business models exist and are used during design and development.	Application portfolio planning and business modeling manifest within the enterprise architecture process model. Modeling techniques and methods are re-examined periodically to ensure content is well understood and communicated. Model use is measured.	Metrics gathered at Level 4 drive process improvements. Enterprise portfolio replaces application portfolio. Enterprise portfolio encompasses business logic, data, infrastructure, services and business changes. Enterprise modeling is an automated competency. Models are kept current.

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IT Investment, and Procurement Strategy	No strategic IT procurement strategy.	Little or no adherence to existing Standards Profile. Little or no involvement of strategic planning and procurement personnel in enterprise architecture process.	Some adherence to existing Standards Profile. Little or no formal governance of purchasing and order content.	IT procurement strategy exists and includes compliance measures to IT Enterprise Architecture. Adherence to existing Standards Profile. RFQ, RFI and RFP content is influenced by the IT Architecture. Acquisition personnel are actively involved in IT Architecture governance structure.	All planned IT acquisitions and purchases are guided and governed by the IT Architecture. RFI and RFP evaluations are integrated into the IT Architecture planning activities. Technology and application obsolescence plans are constructed and integrated into current baseline inventories.	No unplanned IT procurement activity.